

Keighin and others, 1989

Data Set 33

Reference: Keighin, C.W., B.E. Law, and R. M. Pollastro, 1989, Petrology and reservoir characteristics of the Almond Formation, Greater Green River Basin, Wyoming: in Petrogenesis and petrophysics of selected sandstone reservoirs of the Rocky Mountain region, E.B. Coalson et al., eds., Rocky Mountain Association of Geologists, Denver, Colorado, p. 281-298.

Author's affiliation: U. S. Geological Survey

Age: Late Cretaceous

Formation: Almond Formation, Mesaverde Group

Location: Great Divide Basin, eastern flank of Rock Springs uplift, Wamsutter Arch, and northeastern flank of Washakie Basin, southwestern Wyoming, US

Wells: Cores from 25 wells listed below

Depth range: 3,474 - 14,271 feet

Lithology: "Very fine to fine grained, lithic, illitic, kaolinitic, and quartzose sandstones."

Alteration: "Carbonate and/or silica cements; authigenic kaolinite; dissolution of carbonate cement and some framework grains"

Clay mineralogy: "Kaolinite is the most abundant clay in the shallower reservoir sandstones, which commonly are extensively cemented by authigenic kaolinite. Kaolinite abundance decreases with increasing depth; it normally is rare or absent in sandstone below 9,000 ft. Chlorite was not detected in any sandstone samples. Illitic clays dominate the smaller-than two micron assemblage below 9,000 ft. and include discrete illite and interstratified illite/smectite. Little smectitic clay is found in either sandstones or shales."

Production: oil and gas

Core measurement conditions: Ambient conditions for data in Table 3. Values of porosity and permeability in table are averages and ranges for each well. Number of samples not given.

Data entry: manual entry from Table 3 of the referenced paper.